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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/600,204	07/12/2000	DOUGLAS E. OLSON	MAN03P-110	7901

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EXAMINER	
SHAPIRO, JEFFERY A	

ART UNIT	PAPER NUMBER
3653	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/600,204	OLSON ET AL.	
	Examiner	Art Unit	
	Jeffrey A. Shapiro	3653	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 August 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25 and 32-37* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25 and 32-37* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-25 and 33-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard II, et al (5,472,309) in view of Sjogren et al (US 5,181,820). Bernard discloses the following.

As described in Claims 1 and 33-37;

a. a sortation conveyor having a main *conveying* line (24) defined by a conveying surface *that conveys randomly arranged containers of sorted mail*;

(Note that the item sorted is considered to be inconsequential since the conveyor system can perform essentially the same function using essentially the same structure regardless of the item conveyed.)

b. *said conveying surface comprising at least one of conveyor rollers and a conveying belt;* (See fig. 3, illustrating rollers and figs 5 and 7 as well as col. 9, lines 54-54, mentioning belt element (229).)

c. a plurality of spurs extending *generally horizontally* from *at least one side of* said *main* line;

(See figures 1 or 5, noting offshoots or spurs such as roller or belt elements leading to work stations (14), for example).

d. *said main line including a plurality of diverter mechanisms, each of said diverter mechanisms being positioned at an associated one of said spurs;* (See col. 14, lines 29-42.)

e. a diverter mechanism at each of said spur, *said diverter mechanisms being positioned along said conveying surface and being operable to* selectively divert containers *generally horizontally* from said conveying surface onto the associated one of said spurs; (See col. 14, lines 29-42.)

Bernard does not expressly disclose, but Sjogren et al discloses the following.

As described in Claims 1 and 33-37;

f. at least one transport mechanism (10) which transports containers from each of said spurs to a *particular dispatch* cart (70) juxtaposed with that spur;

g. *said at least one transport mechanism (16) that removes containers from each of said spurs, moves the removed containers generally vertically to a position adjacent to an opening in the particular dispatch cart, and inserts the removed containers into the opening in the particular dispatch cart (note also element (110)—see figure 4 and col. 12, lines 23-32);*

As described in Claim 2;

h. said at least one transport mechanism is automatically operated and said carts are hand-operated;

(Note that regardless of whether the carts are hand operated or not, the apparatus and system of Sjogren functions as described in Claim 2—see also CPU (32) and col. 7, lines 57-58. Note also that it would have been obvious to make a hand operated cart automated or an automated cart manual by eliminating the automation.)

As described in Claim 3;

i. a diverter mechanism (36) which diverts containers from a feed line onto said conveying surface; (See also col. 14, lines 29-42 of Bernard, which mentions a diverter.)

As described in Claim 4;

j. said at least one transport mechanism (110) lowers containers from each of said spurs to a subjacent cart associated with that spur; (See figure 3 and col. 12, lines 23-32.)

As described in Claim 5;

k. said at least one transport mechanism (110) includes a plurality of stationary transport mechanisms (16 or 20), one associated with each of said spurs; (Note also that it would be obvious to add a transport mechanism to various spurs in order to increase throughput.)

As described in Claim 6;

l. said at least one transport mechanism travels between plural ones of said spurs;

(Note that overhead device (36) is capable of transporting to a spur and that transfer mechanism depicted in figure (3) is also capable of transport between spurs by said diverting mechanisms. It would have been obvious that two "ramp" (16) and platform (20) sets located side by side would deliver items to a common stopping point on each platform wherein the pusher would act to push both items crossways to the two co-located platforms.)

As described in Claim 7;

m. said at least one transport mechanism raises a subjacent cart associated with that spur to the level of that spur and moves containers directly from the spur to the cart; (Note that raising a cart to the work or lowering the work to the cart is considered to be functional equivalents of each other.)

As described in Claim 8;

n. said transport mechanism (110) includes an extendable support member ((152)—see also (112a and 112a') in figure 4) and a vertical lift (114), said extendible support member adapted to retrieve containers from said at least one of said spurs;

o. inserting containers (items) to the associated cart;

p. said vertical lift adapted to moving said support member between the vertical level of said one of said spurs and the vertical level of the associated cart; (See figures 1 and 3)

As described in Claim 9;

q. said extendable support member (152) includes a plurality of fingers (112a) which comb between portions of said at least one of said spurs below containers supported on that spur (note that roller platform assembly (20) can also be construed as a spur);

As described in Claims 10 and 17;

r. said spur includes a conveying surface made up of a plurality of roller members (see figure 1);

s. said fingers comb between said roller members (note that said fingers are capable of moving between the rollers and that it would be obvious to one ordinarily skilled in the art);

As described in Claim 11;

t. said vertical lift elevates said fingers upwardly in order to retrieve a container from said one of said spurs and elevates said fingers downwardly in order to insert a container to the associated cart (see figure 13);

As described in Claim 12;

u. said extendable support member is extended according to a controlled acceleration profile; (Note that the apparatus is controlled by a

computer (32) controlling a servo motor (M1), which can be construed as being driven according to an acceleration profile—see figure 2j, for example, which indicates "down high speed" and "up high speed" steps.)

As described in Claim 13.

v. said extendable member (112) is extended by a variable frequency motor (176);

As described in Claim 14;

w. said vertical lift is servo controlled; (See servo M1, for example.)

As described in Claim 15;

x. a plurality of said transport mechanisms wherein each of said transport mechanisms is inhibited from operation when a cart serviced by that transport mechanism is being replaced;

(Note that it is, at the very least, obvious that the transport mechanisms would be inhibited by shutting off their power or placing an interlock on them, for example, when carts are being changed or maintenance is being performed so that the transport mechanism does not damage a cart or cargo, or become damaged itself. Official notice is taken that OSHA requires such estops or interlocks in order to prevent occupational injuries by portions of the system that provide possible "pinch points" and other such areas of danger to personnel.)

As described in Claim 16;

y. other transport mechanisms are not inhibited from operation when one of said transport mechanisms is inhibited from operation; (It would have been obvious that other transport mechanisms in the same system would have been made to be safely operational while other parts of the system are down so as to continue to maximize work throughput and efficiency.)

As described in Claim 19;

z. each of said diverters (36) is a pop-up diverter; (note that a pop up diverter is considered to be a functional equivalent of the diverter used in (36).) (Note also that Bernard describes using well-known diverters of which a pop up diverter is construed as such. See col. 14, lines 29-42.)

As described in Claim 20;

aa. wherein said spurs are arranged on both sides of said conveying surface and wherein each of said diverters is bi-directional; (Note again that this is considered to be a well-known type of diverter.)

As described in Claim 21;

ab. an alignment device (92 or 94) positioned adjacent each of said carts, which aligns containers being inserted to the associated cart;

As described in Claim 22;

ac. said alignment device is funnel shaped; (See flared portion (92a), which can be construed to be "funnel shaped".)

As described in Claim 23;

ad. said fingers (112a) are extendable horizontally in order to engage a container—see figure 4;

As described in Claim 24;

ae. said extendable support member further includes a stripper member (elements 51, 54, 56, 57 and 59 or elements 151 and 154) extendable horizontally independently of said fingers in order to slide containers off of said fingers;

As described in Claim 25;

af. including a plurality of cart areas each having an enclosure with a movable gate that can be selectively opened to allow other carts in other cart areas to be loaded while one cart is being removed; (See figure 1.)

Both Bernard and Sjogren are considered analogous art since they both concern conveyors and the movement of materials on them.

At the time of the invention, it would have been obvious to one ordinarily skilled in the art to have used the cart loading mechanism of Sjogren in the delivery system of Bernard.

The suggestion/motivation would have been to provide a means to load carts with items for delivery at various spurs (14) so as to improve the efficiency of a delivery system that delivers many items to plural destinations. See col. 5, lines 36-40 of Bernard, which states that various workstations can be used to accommodate various

tasks and Sjogren, col. 4, lines 62-68 and col. 5, lines 1-25. Note in particular, Sjogren, Col. 4, lines 67 and 68 and col. 5, lines 1-3.

Therefore, it would have been obvious to combine Bernard and Sjogren in order to obtain the invention as described in Claims 1-25 and 33-37.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bernard in view of Sjogren and further in view of Huang et al (US 5,505,291). Huang discloses a conveyor system as described above. Bernard does not expressly disclose, but Huang et al discloses the following.

As described in Claim 32,

ag. said conveying surface is defined by a line shaft conveyor (see col. 6, lines 50-53, which describes a line shaft conveyor)—(note also that a line shaft conveyor is considered to be a functional equivalent of the conveyor used in the system of Bernard);

Both Bernard and Huang et al are considered analogous art since they both concern conveyors and the movement of materials on them.

At the time of the invention, it would have been obvious to one ordinarily skilled in the art to have used a line shaft conveyor in the system of Bernard.

The suggestion/motivation would have been to provide synchronized force to the drive rollers of the conveyor and to allow reversal of the drive rollers. See col. 5, lines 48-50, 62-65, col. 6, lines 34-39 and 50-53.

Therefore, it would have been obvious to combine Bernard and Huang et al to obtain the invention as described in Claim 32.

Response to Arguments

Applicants assert that the combination of Bernard and Sjogren does not disclose, teach or suggest Applicants' claimed system. As described above, Bernard discloses a system for storing and retrieving goods. See abstract of Bernard, lines 1-3. This system must "sort" items" presented to it in a random fashion. For example, in figure 1, items are received at receiving (20) and eventually presented to storage areas (10), from which items are removed and transported to shipping directly or to other intervening stations and processes from which the items are then directed to shipping. The type of item does not matter as the system will work the same. Simply because the system is in a postal setting where items are postal items is immaterial to the operation of Applicants' system as claimed.

As discussed above, Sjogren discloses and teaches the use of a cart loading apparatus to load items into carts from a spur conveyor. Sjogren's system is not cited as a teaching of a sortation conveyor. Since Bernard presents a system with various workstations and a shipping area, it would have been obvious to one ordinarily skilled in

the art to either use Sjogren's system as either a workstation or as a shipping station, since presenting items to carts for transport would have been recognized as a solution to the problem of transportation of items from one workstation to another or from the shipping point of the system to a destination point. Note also that, as described above, Sjogren's system discloses diverter mechanisms (such as (51 or 154) to divert items from a conveyor line. Bernard also describes use of diverter mechanisms (see above discussion and col. 14, lines 29-42.) The basic principle and operation of Bernard's system is not changed by the use of Sjogren's apparatus in Bernard's system. On the contrary, as described above, Sjogren's apparatus solves a problem presented by Bernard's system—that is, how to handle movement of items from shipping or from a particular workstation to another.

Therefore, it would have been obvious to combine Bernard and Sjogren to obtain the invention as described in Claims 1-25 and 33-37.

Regarding Claim 32, note that Huang, as described above, discloses use of a line conveyor for maintaining synchronicity among various conveyor portions. It would have been obvious to use such as conveyor in the system of Bernard where synchronicity is required. Such synchronicity would be seen as necessary in order to coordinate various parts of the system with each other for maximum efficiency.

Therefore, it would have been obvious to use Huang to teach the use of line conveyors in the system of Bernard.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey A. Shapiro whose telephone number is (703)308-3423. The examiner can normally be reached on Monday-Friday, 9:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald P. Walsh can be reached on (703)306-4173. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffrey A. Shapiro
Examiner
Art Unit 3653

November 13, 2004

DONALD P. WALSH
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